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Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



Jay is painting a wall in his bedroom. He invited his friend Alex over to help him paint. Jay painted 2/3 of the wall and Alex painted 1/4 of the wall. How much of the wall did they paint altogether? How much of the wall still needs to be painted?

Justify your solution with numbers, pictures, and/or words.

Using what you learned from our discussion about the Painting Party problem, solve these number sentences.

Justify your solution with pictures, numbers, and/or words.

|  |  |  |
| --- | --- | --- |
| 1/3 + 1/2 = | 1/4 + 1/3 = | 2/4 + 1/3 = |

* What standards does this lesson address?
  + 5.NF.1 Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. *For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/12. (In general, a/b + c/d = (ad + bc)/bd.)*
  + For an excellent description about how other teachers have addressed this standard (including classroom discussions and additional problems) see Chapter 2 and Chapter 8 in your book Extending Children’s Mathematics: Fractions and Decimals by Empson and Levi.
* Why were these number sets chosen for this problem?
  + The number set for the Painting Party problem is 2/3 + 1/4. This number set was chosen because the denominators have no common factor (other than one). This means that students will have to replace both fractions with an equivalent fraction to find the sum. (See page 185 in Extending Children’s Mathematics for further explanation of the sequence of these number choices).
  + Each of the follow up number sentences deals with a similar situation. The denominators in each number sentence have no common factor (other than 1). Therefore, it will be necessary to find an equivalent fraction for both fractions in the number sentence.
  + All of the denominators in the Painting Party problems are halves, thirds, or fourths – these denominators were chosen because they allow for students to still draw a model to solve the problem and/or explain their thinking.
* What are some expected student strategies and misconceptions? How can I address these strategies and misconceptions in our class discussion?

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| --- | --- | --- |
| Number Set | Possible Student Strategies and Misconceptions | Possible Ways to Address Strategies and Misconceptions in Class Discussion |
|  | Coming Soon! |  |